IN THE CLAIMS

1. (currently amended) A method of displaying an input signal, the method comprising:

sampling the input signal;

searching for a zero space pattern in the sampled signal;

determining, if zero space pattern is not found, whether non-return-to-zero (NRZ) autoscale is applicable if zero space pattern is not found;

performing, if zero space pattern is found, the following:

locating a first zero space;

locating a second zero space, following the first zero space;

calculating bit period of the input signal by determining time period between the first zero space and the second zero space;

displaying the input signal using the calculated bit period as the basis for a scale; and

wherein each of the zero spaces is a period of time with no signal value above a threshold.

2. (original) The method recited in claim 1 further comprising initializing offset and time scale.

3. (currently cancelled).

4. (original) The method recited in claim 1 wherein the step of locating the first zero space comprises:

locating a first transition, X_1, where value of the input signal is more than a threshold value, V_{THRES}, before the first transition, X_1, but less than the threshold value, V_{THRES}, after the first transition, X_1, the first transition, X_1, being the first such transition following the offset; and

locating a second transition, X_2, where value of the input signal is less than

the threshold value, V_{THRES}, before the second transition, X_2, but more than the threshold value, V_{THRES}, after the second transition, X2, the second transition, X_2, being the first such transition following the first transition, X_1.

5. (original) The method recited in claim 4 wherein the step of locating the second zero space comprises:

locating a third transition, X_3, where value of the input signal is more than a threshold value, V_{THRES}, before the third transition, X_3, but less than the threshold value, V_{THRES}, after the third transition, X_3, the third transition, X_3, being the first such transition following the second transition, X_2; and

locating a fourth transition, X_4, where value of the input signal is less than the threshold value, V_{THRES}, before the fourth transition, X_4, but more than the threshold value, V_{THRES}, after the fourth transition, X_4, the fourth transition, X_4, being the first such transition following the third transition, X_3.

6. (original) The method recited in claim 5 wherein the step of calculating the bit period comprises determining temporal difference between the third transition, X_3, and the first transition, X_1.

7. (original) The method recited in claim 1 further comprising displaying the input signal using a multiple of the calculated bit period as the scale.

8. (currently amended) An apparatus for displaying an input signal, the apparatus comprising:

a processor;

storage connected to the processor, the storage including instructions for the processor to:

sample the input signal;

search for a zero space pattern in the sampled signal;

determine, if zero space pattern is not found, whether non-return-to-zero (NRZ) autoscale is applicable if zero space pattern is not

found;

perform, if zero space pattern is found, the following:

locate a first zero space;

locate a second zero space, following the first zero space;

calculate bit period of the input signal by determining time period between the first zero space and the second zero space; ~~and~~

display the input signal using the calculated bit period as the basis for a scale; and

wherein each of the zero spaces is a period of time with no signal value above a threshold.

9. (original) The apparatus recited in claim 8 wherein the storage further comprises instructions for the processor to initialize offset and time scale.

10. (currently cancelled).

11. (original) The apparatus recited in claim 8 wherein the storage further comprises instructions for the processor to:

locate a first transition, X_1, where value of the input signal is more than a threshold value, V_{THRES}, before the first transition, X_1, but less than the threshold value, V_{THRES}, after the first transition, X_1, the first transition, X_1, being the first such transition following the offset; and

locate a second transition, X_2, where value of the input signal is less than the threshold value, V_{THRES}, before the second transition, X_2, but more than the threshold value, V_{THRES}, after the second transition, X2, the second transition, X_2, being the first such transition following the first transition, X_1.

12. (original) The apparatus recited in claim 11 wherein the storage further comprises instructions for the processor to:

locate a third transition, X_3, where value of the input signal is more than a threshold value, V_{THRES}, before the third transition, X_3, but less than the threshold

value, V_{THRES}, after the third transition, X_3, the third transition, X_3, being the first such transition following the second transition, X_2; and

locate a fourth transition, X_4, where value of the input signal is less than the threshold value, V_{THRES}, before the fourth transition, X_4, but more than the threshold value, V_{THRES}, after the fourth transition, X_4, the fourth transition, X_4, being the first such transition following the third transition, X_3.

13. (previously presented) The apparatus recited in claim 8 wherein the storage further comprises instructions for the processor to determine temporal difference between the third transition, X_3, and the first transition, X_1.

14. (original) The apparatus recited in claim 13 wherein the storage further comprises instructions for the processor to display the input signal using a multiple of the calculated bit period as the scale.

15. (currently amended) A machine readable medium comprising program for the machine to display an input signal, the program comprising instructions for the machine to:

sample the input signal;

search for a zero space pattern in the sampled signal;

determine, if zero space pattern is not found, whether non-return-to-zero (NRZ) autoscale is applicable if zero space pattern is not found;

perform, if zero space pattern is found, the following:

locate a first zero space;

locate a second zero space, following the first zero space;

calculate bit period of the input signal by determining time period between the first zero space and the second zero space; ~~and~~

display the input signal using the calculated bit period as the basis for a scale; and

wherein each of the zero spaces is a period of time with no signal value above a threshold.

16. (original) The medium recited in claim 15 wherein the medium is selected from a group consisting of magnetic disc, optical disc, read only memory (ROM), random access memory (RAM), harddrive, compact disc (CD), flash memory, and solid state memory.

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